

|   |  |                                    |  |   |  |  |  |
|---|--|------------------------------------|--|---|--|--|--|
| AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT  |  |                                    |  | 1. Contract ID Code<br>Fixed-Price Redetermination  |  | Page 1 Of 3  |  |
| 2. Amendment/Modification No.<br><br>P00014   |  | 3. Effective Date<br><br>2001MAR15 |  | 4. Requisition/Purchase Req No.<br><br>SEE SCHEDULE   |  | 5. Project No. (If applicable)   |  |
| 6. Issued By<br>TACOM<br>AMSTA-LC-AL-P<br>SUE STONER (810)574-8359<br>WARREN, MICHIGAN 48397-5000<br>HTTP://CONTRACTING.TACOM.ARMY.MIL<br>EMAIL: STONERS@TACOM.ARMY.MIL   |  | Code<br>W56HZV                     |  | 7. Administered By (If other than Item 6)<br>DCM BIRMINGHAM<br>BURGER PHILLIPS CENTER<br>1910 THIRD AVE. NORTH, RM 201<br>BIRMINGHAM, AL 35203-2376 |  | Code<br>S0101A   |  |
|   |  |                                    |  | SCD C PAS NONE ADP PT HQ0338  |  |  |  |
| 8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code)<br><br>METRIC SYSTEMS CORPORATION<br>645 ANCHORS STREET<br>FORT WALTON BEACH 32548-0000<br><br>TYPE BUSINESS: Large Business Performing in U.S.   |  |                                    |  | <input type="checkbox"/><br><input type="checkbox"/><br><input checked="" type="checkbox"/><br><input type="checkbox"/>                             |  | 9A. Amendment Of Solicitation No.<br><br>9B. Dated (See Item 11)<br><br>10A. Modification Of Contract/Order No.<br>DAAE07-00-C-M010<br><br>10B. Dated (See Item 13)<br>2000MAR20 |  |
| Code 12339  |  | Facility Code                      |  |   |  |  |  |
| 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS   |  |                                    |  |   |  |  |  |
| <input type="checkbox"/> The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers<br><input type="checkbox"/> is extended, <input type="checkbox"/> is not extended.<br>Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:<br>(a) By completing items 8 and 15, and returning _____ copies of the amendments: (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified. |  |                                    |  |   |  |  |  |
| 12. Accounting And Appropriation Data (If required)<br>NO CHANGE TO OBLIGATION DATA   |  |                                    |  |   |  |  |  |
| 13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS<br>KIND MOD CODE: G It Modifies The Contract/Order No. As Described In Item 14.   |  |                                    |  |   |  |  |  |
| <input type="checkbox"/> A. This Change Order is Issued Pursuant To: The Changes Set Forth In Item 14 Are Made In The Contract/Order No. In Item 10A.   |  |                                    |  |   |  |  |  |
| <input type="checkbox"/> B. The Above Numbered Contract/Order Is Modified To Reflect The Administrative Changes (such as changes in paying office, appropriation data, etc.) Set Forth In Item 14, Pursuant To The Authority of FAR 43.103(b).  |  |                                    |  |   |  |  |  |
| <input checked="" type="checkbox"/> C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of: Mutual Agreement of the Parties  |  |                                    |  |   |  |  |  |
| <input type="checkbox"/> D. Other (Specify type of modification and authority)  |  |                                    |  |   |  |  |  |
| E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the Issuing Office.  |  |                                    |  |   |  |  |  |
| 14. Description Of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)<br><br>SEE SECOND PAGE FOR DESCRIPTION  |  |                                    |  |   |  |  |  |
| Contract Expiration Date: 2007DEC31   |  |                                    |  |   |  |  |  |
| Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.  |  |                                    |  |   |  |  |  |
| 15A. Name And Title Of Signer (Type or print)   |  |                                    |  | 16A. Name And Title Of Contracting Officer (Type or print)<br>MICHAEL T. FINNELL<br>FINNELLM@TACOM.ARMY.MIL (810)574-8361                           |  |  |  |
| 15B. Contractor/Offeror<br><br>(Signature of person authorized to sign)   |  | 15C. Date Signed                   |  | 16B. United States Of America<br><br>By _____ /SIGNED/<br>(Signature of Contracting Officer)  |  | 16C. Date Signed   |  |
| NSN 7540-01-152-8070<br>PREVIOUS EDITIONS UNUSABLE  |  |                                    |  | 30-105-02   |  | STANDARD FORM 30 (REV. 10-83)<br>Prescribed by GSA FAR (48 CFR) 53.243   |  |

|  |   |                           |
|--|---|---------------------------|
| <b>CONTINUATION SHEET</b>  | <b>Reference No. of Document Being Continued</b><br><b>PIIN/SIIN</b> DAAE07-00-C-M010 <b>MOD/AMD</b> P00014 | <b>Page</b> 2 <b>of</b> 3 |
| <b>Name of Offeror or Contractor:</b> METRIC SYSTEMS CORPORATION |   |                           |

SECTION A - SUPPLEMENTAL INFORMATION  
MODIFICATION P00014.

|                              |               |
|------------------------------|---------------|
| PREVIOUS CONTRACT AMOUNT:    | \$ 7,145,012. |
| AMOUNT OF THIS MODIFICATION: | \$ 0          |
| CURRENT CONTRACT AMOUNT:     | \$ 7,145,012. |

- Modification P000014 is issued to correct errors made to both Attachments on Modification P000010.
  - Attachment 4, "Technical Manual Contract Requirements (TMCR)." The incorrect TMCR was attached to Modification P00010. As a result of this change, the TMCR currently in P00010 is deleted in its entirety and replaced with the 26 Jan 2001 TMCR provided herein.
  - Attachment 14, "Metric Systems Performance-Based Payments CLIN 1012AA" was omitted from Modification P00010. Attachment 14 is provided herein.
- This action does not result in any change to the total contract amount. All other terms and conditions of the contract remain unchanged.

\*\*\* END OF NARRATIVE A 014 \*\*\*

|   |   |                |             |
|---|---|----------------|-------------|
| CONTINUATION SHEET  | Reference No. of Document Being Continued |                | Page 3 of 3 |
|   | PIIN/SIIN DAAE07-00-C-M010                | MOD/AMD P00014 |             |
| Name of Offeror or Contractor: METRIC SYSTEMS CORPORATION |   |                |             |

SECTION J - LIST OF ATTACHMENTS

| <u>List of<br/>Addenda</u> | <u>Title</u>   | <u>Date</u> | <u>Number<br/>of Pages</u> | <u>Transmitted By</u> |
|----------------------------|--|-------------|----------------------------|-----------------------|
| Attachment 004             | SLEP TMCR  | 26-JAN-2001 |                            | DATA                  |
| Attachment 014             | METRIC SYSTEMS PERFORMANCE-BASED PAYMETNTS CLIN 1012AA | 09-FEB-2001 |                            | DATA                  |

Attachment 4  
TECHNICAL MANUAL CONTRACT REQUIREMENT (TMCR)  
26 JAN 01

1.0 SCOPE. This Technical Manual Contract Requirement (TMCR) defines requirements for the Contractor in the preparation and delivery of full-up LAV TMs and Interactive Electronic TMs (IETMs). The Contractor is required to provide, in accordance with this TMCR, full up TMs and IETMs for the manuals specified herein for the following LAV variants: LAV-25, LAV-AT, LAV-R, LAV-CC, LAV-L, LAV-M and LAV-AD. The TMCR sections address the following:

- a. Contractor activity and data deliverables during the R&D phase (Phase I) of the Contract
- b. Contractor activity and data deliverables during the Production phase (Phase II) of the Contract

1.1 General Requirements.

1.1.1 Full-up TMs are defined to include the following attributes:

- a. Full integration of changes to current LAV TMs reflecting not only all LAV SLEP upgrades but also all non-SLEP ECPs and NAV MAC 10772 corrections submitted by the Government for inclusion. The TMs shall be so rendered that the changes cannot be detected from an examination of TM format and style alone.
- b. Changes to be integrated to existing LAV TMs shall include vehicle lubrication, operation, troubleshooting, maintenance, electrical schematics, parts data and other data changes, as applicable.
- c. The Contractor is responsible for including all non-SLEP changes submitted by the Government between time of publication of the current LAV TMs and the Contractor cutoff date for final TM publication in Phase II.
- d. The Contractor is not responsible to search for and correct errors that already exist in the current TMs. However, the Contractor will correct small errors and shall notify the Government of significant errors uncovered during the course of TM/IETM development. The Government and the Contractor shall determine how best to correct significant errors.
- e. The Contractor shall render all updated GFI TM data into TMs/IETMs reflecting the style and format of the GFI TMs originally provided at the Start of Work meeting. The Marine Corps Style Guide [SG-1A] serves as a reference. This requirement became necessary because some of the updated GFI TMs were rendered incorrectly.
- f. In developing SLEP-adjusted, hardcopy full-up TMs and IETMs the Contractor shall use Format Output Specification Instances [FOSI] and Data Type Definitions [DTD] that are compatible with existing LAV TMs and/or which have been provided by the Government.

1.1.2 IETMs shall:

- a. Be based upon Contractor-adjusted LAV TM data. The IETMs shall include LAV variants specified in paragraph 1.0 and all maintenance echelons.
- b. Be rendered into Interactive Authoring and Display System (IADS). The Contractor shall use the same version of IADS throughout the development of all LAV IETMs.
- c. Be in accordance with MIL-M-87268A to the extent possible.
- d. Be based on a linear .sgml document file, not a hierarchical database.
- e. Allow user navigation of the IETM, based upon author-developed constructs employing prompted dialog boxes and content-driven logical ?Next? and ?Back? functions.
- f. Allow for dialog-driven interaction and provide a logical display of data in accordance with content.
- g. Include user-selectable cross references and indices.
- h. Apply to the entire set of LAV TMs. Hypertext, as an example, would be applied to non-SLEP portions of the LAV TM narratives, illustrations, tables and related data.
- i. Enable users to print a portion or all of a given TM contained within the IETM, according to need.

1.1.3 Technical Manual Database: The Contractor's TM database shall, after completion of SLEP, become the baseline LAV TM database.

- a. The Contractor shall be responsible for maintaining the database in IADs for the SLEP-adjusted, full-up LAV TMs/IETMs; and for delivering full-up hard copy TMs and IETMs, as required herein, from the data in the IADs database.
- b. The Contractor shall adjust its database to reflect changes arising from scenarios as shown in Encl 1 of this TMCR.
- c. The Contractor shall provide updates to the Government which pertain to required non-SLEP changes in accordance with Encl, 1.
- c. The Contractor shall develop a log for tracking changes to the technical manual, which must also be reflected in the Government's database for non-SLEP LAV TMs, as cited in encl 1.

1.2 Government Furnished Information (GFI).

1.2.1 The Government will provide camera-ready hardcopies of all applicable LAV TMs to the Contractor. The sheets of paper will be printed on one side only, to facilitate scanning into the Contractor's database. TMs to be provided include LAV-25, LAV-AT, LAV-CC, LAV-R, LAV-M, LAV-L, and LAV-AD.

1.2.2 The Government will provide the Contractor sample IETMs developed for other weapon systems which the Contractor may use as

models for LAV IETM development.

1.3 Referenced Guidances. The Contractor may use the following documents to assist in its preparation of SLEP-adjusted LAV TMs and IETMs:

|                |  |
|----------------|--|
| MIL-PRF-28001  | Performance Specification Markup Requirements<br>And Generic Style Specification for Exchange<br>of Text and its Presentation                                    |
| MIL-PRF-38784  | Manuals, Technical: General Style and<br>Format Requirements   |
| MIL-STD-12     | Abbreviations for use on Drawings and in<br>Specifications, Standards, and Technical<br>Documents  |
| MIL-STD-1840A  | Interface Standard Automated Interchange of<br>Technical Information   |
| SG-1A          | U.S. Marine Corps Style Guide  |
| MIL-STD-2361A  | Interface Standard, Digital Publications Development   |
| MIL-PRF-87268A | Interactive Electronic Technical Manuals - General<br>Content, Style, Format and User Interaction Requirements   |
| MIL-PRF-28002C | Requirement for Raster Graphics Representation in Binary Format:<br>Guidance on developing raster drawings. To be used when working with existing illustrations. |
| MIL-D-28003    | Guidance on developing vector graphics. To be used for new<br>illustrations.   |

1.4 TM/IETM Development.

1.4.1 The Contractor shall develop the following full-up LAV TMs during Phase I for all LAV variants specified in paragraph 1.0 of this TMCR: -10 Operators Manuals, -12 Lubrication Instructions, -20 Organizational Maintenance Manuals, -34 Intermediate Maintenance Manuals, -50 Depot Repair Standards, Vehicle-Specific Tools Lists (SL-3), and Parts Manuals (SL-4).

1.4.2 Technical documentation shall be written in simple, practical English. All terminology, symbols, and abbreviations shall be readily understandable by maintenance technicians. Use of abbreviations shall be held to a minimum and shall be defined the first time they appear in the text.

1.4.3 The Contractor shall develop LAV TMs/IETMs so that they are complete with front matter, text, tables, and illustrations. TM/IETM data shall include corrections resulting from the Logistics Reviews and/or any unscheduled In-Process Reviews.

1.4.4 The Contractor shall add, adjust, and/or delete pages in the GFI manuals to:

- a. Generate TMs/IETMs for all specified LAV variants at all maintenance echelons
- b. Reflect the LAV configuration.
- c. Provide narratives of LAV operation and maintenance tasks. This includes operation, lubrication, troubleshooting, electrical schematic(s) and removal/replacement and repair tasks and related maintenance data.
- d. Adjust the LAV SL-3s, SL-4s and related data contained in the GFI TMs to reflect LAV modifications.
- e. Ensure the LAV Contractor-adjusted TMs/IETMs retain the existing LAV TM formats. In cases where the Government guidance referenced in paragraph 1.3 describes formatting that differs with the format of the current LAV TMs, the Contractor shall adhere to the format of current LAV TMs.

1.4.5 Vehicle-specific SL-3s are to be incorporated into the applicable -10 TM/IETM as an appendix.

1.4.6 TM Plan. The Contractor shall prepare and submit a TM plan IAW ELIN A017. At a minimum, the Contractor's plan shall include a TM outline for each variant and the Contractor's proposal for developing LAV TMs/IETMs that apply to the specified LAV variants. The TM outline shall identify the proposed layout and table of contents for TMs/IETMs of each specified variant. The Contractor shall update the TM plan throughout TM/IETM development, as needed.

1.4.7 Technical Manual Quality Assurance (QA) Plan. The Contractor shall develop a QA plan to ensure that the TMs/IETMs it develops and delivers under this Contract are produced IAW the current LAV TM style and format. The QA plan shall include Contractor support for applicable conferences, Logistics Reviews and IPRs. The Contractor shall make the QA plan available to the Government for review upon request. The Contractor shall update the QA plan throughout TM/IETM development, as needed.

1.4.8 Program Management. The Contractor shall develop a schedule for Phase I and II development and fielding of TMs/IETMs, to be incorporated into the existing program schedule.

1.4.9 TM Validation/Verification.

1.4.9.1 The Contractor shall perform a validation of the operation and maintenance tasks and related data it develops for LAV SLEP modifications. Contractor Validation of non-SLEP changes/manual data provided is not required, except for identification and correction of any errors due to scanning in hard copy data, as per Attachment 1. All Contractor validation shall be performed prior to the applicable Logistics Review. Validation shall include but not be limited to the following:

- a. Contractor's engineering technical review has been completed.
- b. Information shall reflect configuration of the system/equipment and shall include all engineering changes.
- c. Procedural instructions shall be readily understandable by the intended user and be adequate to perform all operation and maintenance functions.
- d. Data shall be checked to ensure that they support the approved maintenance and support plan.

1.4.9.2 The Government will verify Contractor-developed tasks and related data during Contractor-scheduled Logistics Reviews as described in paragraph C.15.5. The Government shall also perform sample verification of non-SLEP changes/manual data for purpose of identifying errors due to scanning in hard copy data in accordance with Attachment 1. The Contractor shall provide draft SL-4 pages IAW ELIN A011 and corrected TM and SL-4 pages IAW ELIN A012. The Contractor shall provide assistance and support during the Government's verification.

1.4.10 IETM Validation/Verification. Validation and verification shall focus upon form, function and other characteristics unique to IETMs. The Contractor shall develop the necessary procedures with the Government's support/assistance. The Government shall approve the procedures prior to Contractor implementation. The Government will evaluate/verify the Contractor's capability to print out full-up hard copy TMs in USMC style and from the data in the IADS database.

1.4.11 Unscheduled In Process Reviews. The Government may request up to two unscheduled IPRs at the Contractor site during the R&D and/or production phases to ensure that the Contractor's TM development is IAW Contract requirements. The Contractor will host the IPR at its site NLT thirty days after Government notification. The Contractor shall provide support and access to publication materials and any source data. The Contractor shall record meeting minutes, decisions and/or discrepancies resulting from the IPRs and make the required adjustments to the TMs. The Contractor has the option to request additional IPRs if it requires assistance in developing the TMs/IETMs and maintenance data.

2.0 PHASE I: R&D. This phase consists of:

- a. Development of all LAV operator and maintenance tasks and related data
- b. Insertion of applicable change pages into existing LAV TMs for use during training and DT/OT
- c. Completion of first draft TMs
- d. Development of LAV IETMs

2.1 Data Item Deliverables. The Contractor shall deliver the following data items in accordance with Contract ELINs and the contents of this TMCR:

- a. TM plan
- b. TMs that support SLEP DT/OT training and test effort
- c. Interim, full-up TMs at the end of DT/OT
- d. Interim, full-up IETMs for the LAV-25, as a minimum

2.2 Validation.

2.2.1 The Contractor shall validate all tasks and related data in accordance with section 1.4.9. The Contractor shall ensure that all operation, preventive maintenance and remove/replace tasks and related data are validated prior to the beginning of DT. The Contractor shall complete validation of organizational level repair prior to the beginning of OT.

2.2.2 The Contractor shall conduct a validation for form and function of LAV IETMs as described in paragraph 1.4.10.

2.3 Verification.

2.3.1 The Government shall verify all tasks and related data in accordance with section 1.4.9. The Contractor must provide all operation, preventive maintenance and repair/replacement tasks and related data for Government review prior to the beginning of DT/OT.

2.3.2 The Government shall verify that LAV IETMs conform to form and function requirements described in paragraph 1.1.2 in accordance with paragraph 1.4.10. Verification will involve selection of sample operation and/or maintenance tasks which will be performed to ensure that IETMs meet functional requirements and operate in a logical, user-friendly manner.

2.4 TM Hardcopy Deliverables. The Contractor shall deliver full up draft hardcopies of the TMs as shown below:

2.4.1 At the Start of DT. The Contractor-adjusted TMs must, as a minimum:

- a. Provide complete directions for operating, troubleshooting, preventive maintenance and removal/replacement of SLEP components.
- b. Contain SL-4 and related maintenance data that are developed in conjunction with the above operation and maintenance tasks.

| <u>QTY</u> | <u>Location</u>                                    | <u>LAV-25 Manuals</u>   |
|------------|--|---|
| 25ea       | DT Training Site                                   | -10 Operator Manual<br>-12 Lubrication Instruction<br>* -20 Organizational Manual<br>* -34 Intermediate Manual<br>SL-4 Parts Manual |
| 1ea        | PM LAV<br>AMSTA-DSA-LV-M<br>WARREN, MI 48397-5000  | One copy of each TM above   |
| 1ea        | Commander,<br>Code PSD-M2<br>MARCORSYSCOM          | One copy of each TM above   |
| 1ea        | Commander<br>Code 835<br>Materiel Command (MATCOM) | One copy of each TM above   |

\* As required in order to complete operation, preventive maintenance, troubleshooting and removal/replacement.

2.4.2 At the Start of OT. The Contractor shall provide SLEP-adjusted TMs conforming to the description in paragraph 2.4.1 to the OT test site at the beginning of OT training as shown below.

| <u>QTY</u> | <u>Location</u>  | <u>LAV-25 Manuals</u>  |
|------------|------------------|--|
| 25ea       | OT Training Site | -10 Operator Manual<br>-12 Lubrication Instruction<br>-20 Organizational Manual [includes organizational repair]<br>* -34 Intermediate Manual<br>SL-4 Parts Manual |

\* As required in order to complete operation, preventive maintenance, troubleshooting and removal/replacement.

2.4.3 TMs for LAV Variants. The Government will coordinate with the Contractor if DT/OT is to include testing of variant(s) in addition to the LAV-25. In this case, the Contractor shall deliver SLEP-adjusted TMs for the variant(s) to be tested which conform to the requirements described for LAV-25 TMs above.

2.4.4 Interim TMs. The Contractor shall deliver completed, full up hard copy LAV TMs and SL-4s for all LAV variants specified in paragraph 1.0, to reflect all SLEP modifications and non-SLEP changes at the end of OT IAW the following distribution:

| <u>Qty</u> | <u>Location</u>                                   | <u>Media</u>  |
|------------|---|---|
| 1ea        | PM LAV<br>AMSTA-DSA-LV-M<br>WARREN, MI 48397-5000 | -10 Operator Manual<br>-12 Lubrication Manual<br>-20 Organization Manual<br>-34 Intermediate Manual |

-50 Depot Manual  
 SL-4 Parts Manual

1ea Commander, One copy of each TM above  
 Code PSD-M2  
 MARCORSYSCOM

1ea Commander One copy of each TM above  
 Code 835  
 Materiel Command (MATCOM)

2.4.5 Interim IETMs. The Contractor shall deliver CD ROMs at the end of DT/OT which contain all task narratives and related data that have been rendered as IETMs for all LAV variants specified in paragraph 1.0, to the addressees and in the quantities listed in paragraph 2.4.4.

3.0 Phase II: PRODUCTION. This phase consists of finalization and delivery of all LAV TMs and IETMs.

3.1 Data Item Deliverables. The Contractor shall deliver the following data items in Phase II of SLEP, in accordance with Contract Statement of Work and the contents of this TMCr, in accordance with paragraph 1.4.1:

- a. A final draft of camera-ready TMs to include all LAV variants specified in paragraph 1.0, all operator tasks, SL-3 and SL-4 data and all maintenance echelons.
- b. IETMs as CD ROMs, to include all LAV variants specified in paragraph 1.0, all operator tasks, SL-3 and SL-4 data and all maintenance echelons.
- c. The IADS IETM database, including all source file, support file, output files, etc. (in accordance with MIL-STD-2361A) that are required to maintain, update, and generate IETMs and hard copy TMs. This data shall include all LAV variants specified in paragraph 1.0, all operator tasks, SL-3 and SL-4 data and all maintenance echelons.

3.2 Validation/Verification. The Contractor shall complete validation of all tasks and related data for both LAV TMs and IETMs in accordance with section 1.4.9. This shall include all SLEP design and/or task changes resulting from DT/OT. The Contractor shall schedule Logistics Reviews so that the Government can complete its verification prior to TM/IETM publication.

3.3 TM Identification and Publication Numbers. No new identifiers are required for the Contractor's adjusted, hardcopy TMs. However, the Government will provide the Contractor with TM identification numbers and publication control numbers (PCN) prior to Contractor publication of the final draft of the IETM.

3.4 TM Distribution. At the commencement of PVT, the Contractor shall complete its delivery of final, full-up LAV TMs/IETMs and SL-4s to reflect all SLEP modifications. All TMs/IETMs shall be so rendered that the changes cannot be detected from an examination of TM format and style alone.

3.4.1 TM Hardcopy Deliverables for PVT. The Contractor shall deliver full-up hardcopies of LAV-25 TMs at the start of training for product verification testing (PVT). The Contractor shall deliver final hardcopies of TMs IAW the following:

| <u>QTY</u> | <u>Location</u>   | <u>LAV-25 Manuals</u>   |
|------------|-------------------|---|
| 12ea       | PVT Training Site | -10 Operator Manual<br>-12 Lubrication Instruction                        |
| 15ea       | PVT Training Site | -20 Organizational Manual<br>-34 Intermediate Manual<br>SL-4 Parts Manual |

3.4.2 TMs for LAV Variants. The Government will coordinate with the Contractor if PVT is to include testing of variant(s) in addition to the LAV-25. In this case, the Contractor shall deliver copies of adjusted TMs for the variant(s) to be tested, in the quantities set forth in paragraph 3.4.1.

3.4.3 Final Manuals. At the start of PVT, the Contractor shall deliver completed, full up LAV TMs/IETMs and SL-4s for all LAV variants, to include all LAV variants, all operator tasks, SL-3 and SL-4 data and all maintenance echelons. The Contractor shall deliver the TMs/IETMs IAW the following distribution:

| <u>Qty</u> | <u>Location</u> | <u>Media</u>      |
|------------|-----------------|-------------------|
| 1ea        | Commander,      | Camera Ready Copy |



Code 826 Printing Section                      Digital Data and CD ROM  
Marine Corps Logistics Base  
Albany GA 31704-1128

1ea                      PM LAV                      CD ROM  
AMSTA-DSA-LV-M

1ea                      Commander,                      Digital Data and CD ROM  
Code PSD-M2  
MARCORSYSCOM  
2033 Barnett Ave, Suite 315  
Quantico, VA 22134-5010

3.4.4 Fielding of TMs/IETMs. The Contractor shall produce and distribute hard copy TMs and IETMs (as CD ROMs), to accompany SLEP kits and in accordance with their fielding/installation. The exact quantities will be determined prior to the end of the R&D phase.

## Technical Manual Contract Requirement - Encl 1:

Tech Manual Configuration Management  
PM-LAV

1. Background: The initiation and development of SLEP upgrades for the USMC LAV family of vehicles mandates careful management of changes to the TM databases if we are to ensure that the final TMs accurately reflect the eventual SLEP LAV configuration. To accomplish this we must develop procedures to address the various scenarios, identified below, which might arise to contaminate them.

2. Assumptions:

- a. The Government and Metric must both manage separate databases until Metric delivers final TM data at the beginning of PVT, at a minimum.
- b. Metric and Albany will both modify LAV TM data because:
  - (1) The Government must correct and/or update the TMs for field use until:
  - (2) Metric develops and fields a seamless, SLEP-adjusted TM which includes all non-SLEP changes.
- c. Metric requires only one database (IADS) to produce TMs and IETMs.
- d. The Government and Metric each develop a TM data Configuration Log which will be used to track those changes initiated by either party which impact both databases.
- e. The Government and Metric will periodically review and reconcile their respective Configuration Log entries.
- f. Metric will maintain its log on CITIS.

3. CM Procedures: The following procedures apply for each of the scenarios described below:

- a. Metric inserts SLEP change pages:
  - (1) Background: Metric is developing changes to LAV TMs to reflect all SLEP upgrades. These changes include:
    - (a) Insertion of SLEP-related tasks
    - (b) Changes to existing non-SLEP tasks which are impacted by SLEP upgrades
    - (c) Changes to maintenance data driven by SLEP upgrades, such as NSNs, part numbers, SMRs and related codes
  - (2) Data flow:
    - (a) SLEP-Related Tasks:
      - Metric will develop operator and maintenance and related data to reflect LAV SLEP configuration and support.
      - Metric will provide the Government interim TMs consisting of change pages for DT/OT and as first draft at the end of Phase I.
      - Metric will provide the Government with an interim IETM at the end of Phase I.
      - Metric will provide the Government with TM data in digital form (IADS database) suitable for editing at the beginning of PVT.
    - (b) Changes to Non-SLEP Tasks: Metric will make and incorporate the necessary changes prior to final release of TM data.
    - (c) Changes to Maintenance Data: Metric will make and incorporate the necessary changes prior to final release of TM data.
  - (3) Configuration Control:
    - (a) Metric: Total responsibility for developing and maintaining configuration until final TM data, as a minimum. Adjusts TM data IAW Government reviews and/or verification.
    - (b) Government: Impacts TM data configuration control through reviews and verification. Assumes TM data configuration management no earlier than Metric's delivery of final TM data.
    - (c) Configuration Logs: No entry required.
- b. Metric initiates SLEP ECOs and ECPs:
  - (1) Background: Metric may need to adjust its designs for SLEP upgrades. Metric will use Engineering Change Orders for all adjustments prior to DT/OT and will use ECPs after commencement of DT/OT.
  - (2) Data flow:
    - (a) ECOs: Metric will make changes to its TM data. Any information forwarded to the Government is for information purposes.
    - (b) ECPs: Metric ECPs will be reviewed and/or approved by the Government.
  - (3) Configuration Control:
    - (a) Metric: Total responsibility for developing and maintaining configuration until final TM data, as a minimum. Adjusts TM data IAW Government review and/or approval.
    - (b) Government: Reviews approved ECPs in light of future non-SLEP design changes.

(c) Configuration Logs: No entry required.

c. Metric uncovers minor TM errors:

- (1) Background: As it develops SLEP-adjusted TM data, Metric may uncover minor errors in the GFI TMs.
- (2) Data flow: Metric will correct the error and forward the change pages to the Government for incorporation into its non-SLEP TM database.
- (3) Configuration Control:
  - (a) Metric: Incorporates corrections into its SLEP-adjusted TM database.
  - (b) Government: Incorporates Metric's corrections into its non-SLEP TM database.
  - (c) Configuration Logs: No entries are required. Number of entries may be too great to manage effectively. It is therefore most important that the Metric SLEP-adjusted TM database be corrected, since it will eventually replace the Government's non-SLEP TM database.

d. Metric adjusts incorrectly formatted TMs:

- (1) Background: The GFI TMs include tasks and related data in a format which is harder for users to follow. Metric is to render all LAV TMs, with paragraphs sequenced with alpha-numeric characters.
- (2) Data flow: Metric will render its entire SLEP-adjusted TM database to reflect the Government's preferred style and format.
- (3) Configuration Control:
  - (a) Metric: Format adjustment will impact only the SLEP-adjusted TM database.
  - (b) Government: No impact on the non-SLEP database.
  - (c) Configuration Logs: No entry required.

e. Metric does Validation/Verification on scanned TM pages [checking for scan errors]:

- (1) Background: Metric used sophisticated programs to scan and digitize our GFI TMs so that Metric could more easily render the SLEP-adjusted TMs. Errors arising from this edit process may creep into the final TMs.
- (2) Data flow:
  - (a) The Government will conduct a verification of Metric's SLEP-adjusted TM database using statistical sampling techniques. Verification will be restricted to tabletop review of only those errors which might be the result of GFI TM scanning. The Government will determine the percentage figures for review and acceptance/rejection and notify Metric prior to the review.
  - (b) If the SLEP-adjusted TM database is verified, then the review is complete.
  - (c) If the SLEP-adjusted TM database fails verification, then Metric will upgrade the entire SLEP-adjusted TM database and submit the result to the Government for further statistical sampling verification.
- (3) Configuration Control:
  - (a) Metric: Corrects all errors in the SLEP-adjusted database that were identified by the Government.
  - (b) Government: No impact on the non-SLEP TM database.
  - (c) Configuration Logs: No entry required.

When the following conditions are found, Metric will notify the Contracting Officer for further direction. The Contractor is not obligated to make corrections in any of the following scenarios without an equitable adjustment to the contract price:

a. Metric uncovers major TM errors:

- (1) Background: As it develops SLEP-adjusted TM data, Metric may uncover serious errors in the GFI TMs.
- (2) Data flow:
  - (a) Metric notifies the Government that a serious error exists in the TM data.
  - (b) Metric and the Government determine how best to correct the error.
  - If Metric is to correct the error, then Metric makes an adjustment in its TM data after the Government reviews/approves it. Metric then forwards change pages to the Government for incorporation into the non-SLEP TM database.
  - If the Government corrects the error then it forwards Metric the adjustment as one-sided, camera-ready change pages just after it adjusts its non-SLEP database.
  - A procedure is established for comparing and reconciling Government and Metric TM data configuration logs.
- (3) Configuration Control: Since Government and Metric TM databases are impacted, it is imperative that changes initiated by one party are immediately forwarded to the other.
  - (a) Metric: Incorporates Government-initiated changes into its SLEP-adjusted TM database.
  - (b) Government: Incorporates Metric-initiated changes into its non-SLEP TM database.
  - Configuration Logs: Entries required.

b. The Government initiates Non-SLEP ECPs:

- (1) Background: The Government may process and approve non-SLEP ECPs which must be included into the final SLEP-adjusted LAV TMs.
- (2) Data flow:

- (a) The Government provides Metric with an information copy of the approved ECP to Metric.
  - (b) Metric reviews the ECP to determine possible impact to SLEP configuration. If there is an impact, then Metric follows procedures as outlined in paragraph 3b above.
  - (c) Upon publication of the applicable changes, the Government forwards Metric one-sided, camera-ready change pages for incorporation into its SLEP-adjusted TM database.
  - (3) Configuration Control:
    - (a) Metric: Posts changes to its SLEP-adjusted TM database.
    - (b) Government: Posts changes to its non-SLEP TM database.
    - Configuration Logs: Entries required.
- c. Albany receives NAV MAC 10772 corrections from field:
- (1) Background: Often the field will identify errors in LAV TMs which are corrected and published as change pages.
  - (2) Data flow: The Government will forward change pages to Metric upon publication.
  - (3) Configuration Control:
    - (a) Metric: Incorporates corrections into its SLEP-adjusted TM database.
    - (b) Government: Incorporates corrections into its TM database.
    - (c) Configuration Logs: Entries required. The frequency of reports submitted by the field is low enough to make entries practical.
- d. The Government discovers errors resulting from the most recent TM updates:
- (1) Background: A number of changes submitted for inclusion in the GFI TMs did not post or were posted incorrectly. Based upon cursory reviews, the errors seem to be confined to tables and other data such as part numbers and NSNs.
  - (2) Data flow:
    - (a) The Government shall compare changes it submitted for publication with what actually was published.
    - (b) All errors and omissions should be identified.
    - (c) The Government forwards corrected non-SLEP TM data to Metric at the time it publishes the change pages.
  - (3) Configuration Control:
    - (a) Metric: Updates its SLEP-adjusted TM database upon receipt of change pages.
    - (b) Government: Updates its non-SLEP TM database.
    - (c) Configuration Logs: Entries required.

**PIIN/SIIN** DAAE07-00-C-M010  
**MOD/AMD** P00014  
**ATT/EXH ID** Attachment 014  
**PAGE** 1